THE FARMER'S TEN BEST BIRD FRIENDS

They are the night hawk, killdeer plover, chimney swift, bluebird, downy woodpecker, phoebe, chickadee, barn swallow, purple martin and chipping sparrow

By Edward B. Clark

PHOTOGRAPHS FROM U. S. BIOLOGICAL SURVEY

DOWNY WOODPECKERS

AN EMINENT American ornithologist recently was asked to name the ten most beneficial birds of the United States. Here is his answer: Nighthawk, killdeer plover, chimney swift, bluebird, downy woodpecker, phoebe, chickadee, barn swallow, purple martin and chipping sparrow.

Having given the names of the ten birds over whose good deeds man should rejoice the ornithologist said, "But the list is longer. There are other birds and many of them, that work as hard or nearly as hard for man as those which I have named. Between 30 and 40 species there is small room for choice, but let the ten stand because the list perhaps cannot be improved upon."

Later the scientist wanted to hedge a little, for he said that there were some birds of prey which at least should have a place side by side with the familiars of orchard and garden to which he had given first rank. The cause of the birds of prey, however, has been pleaded before. The barn owl, the sparrow hawk and some others have been given their credit marks, but it is to be doubted, perhaps, if anything which can be said in behalf of a predatory one which occasionally picks up a chicken will serve to save its life when it is caught in the act of larceny. Not one of the birds in the Table of Ten is a thief. Honest, well-meaning, cheerful, and for the most part neighborly, they go through their lives working, which means eating, in order that man more fully may reap what he has sown.

It is admittedly probable that some close students of the habits of birds may dispute the accuracy of the list as it is given, but it is not likely that anyone who has watched the daily operations of these friends in feathers from nighthawk to chipping sparrow will be able to prove that so much as one black mark should be entered on the daily records of their lives.

By their appetites ye shall know them. A bird is good or bad from the agriculturists' viewpoint according to what and how much it eats. This is a plain tale of the birds' bill of fare. It is lucky, perhaps, for the songsters, as well as for the tuneless ones, that the birds of the best habits of life are well known by sight to all Americans. The trouble that the bird protectors have found lies almost wholly in the fact that the habits of birds are not as well known as the birds themselves.

It was Dr. A. K. Fisher of the Biological Survey who named the ten most useful birds. He is in charge of "economic investigations" in the Bureau of the Biological Survey of the Department of Agriculture. In the bureau are kept the bird records. The papers in the pigeon holes in part read like the catalogues of a seed store and the collection lists of an entomologist. One can say of the birds that seeds and insects "form the chief of their diet."

To go to the mammals for a figure of speech it has taken years of closest work and field work to separate the sheep from the goats. In the bird world there are many more sheep than there are goats, but the job of separation has been hard. In the little flock of best friends of the farmer there are only two birds which, perhaps, are not well known to all suburban dwellers. The two are the killdeer plover and the yellow-billed cuckoo. The nighthawk, which heads the list, is, or ought to be, known to everybody. Of course it is not a hawk at all, and the name by which it is known in the Northern states, has hurt it. Paraphrasing it might be said, "Give a bird a bad name and it will shoot it." In the Southern states the nighthawk is known as the bull-bat. In the fall and winter it is killed ruthlessly and to no purpose except that of so-called sport, for it is useless, or virtually useless as food.

Nighthawks are wholly insectivorous. They do no damage to crops. F. E. L. Beal, who has made field studies for the Biological Survey of the dietary of virtually all the commoner birds, says of the food of the nighthawk, "True bugs, moths, flies, grasshoppers and crickets are important elements of its food. Several species of mosquitoes, including the transmitter of malaria, are eaten. Other well-known pests consumed by the nighthawk are Colorado potato beetles, cucumber beetles, rice, clover-leaf and cotton-boll weevils, bill bugs, bark beetles, squash bugs and moths of the cotton worm."

The killdeer plover is one of the noisy birds. A part of its Latin name is "Vociferus," which speaks for itself. While the killdeer ordinarily is accounted a game bird it is poor eating. The good that it does should save it from persecution, but gunners are not apt to discriminate, and so the killdeer frequently suffers. This bird lives in the open country. More than 99 per cent of its food consists of animal matter. The record shows: Beetles, 37.06 per cent; other insects, as grasshoppers, caterpillars, ants, bugs, caddis flies, dragon flies and two-winged flies, 39.54 per cent, and other invertebrates as centipedes, spiders, ticks, oyster worms, earthworms, snails, crabs and other crustacea, 21.12 per cent. Vegetable matter composes 2.28 per cent of the total food, and is chiefly made up of weedseeds, such as buttonweed, smartweed, foxtail grass and nightshade. The alfalfa weevil, a new and destructive pest, has been proved to be a favorite food for the killdeer.

The chimney swift, almost always called the chimney swallow, although it is not a swallow at all, is sometimes looked upon as a nuisance because in the summer time it is apt to make more or less of a racket in the chimneys leading from bedrooms in which tired folk are trying to sleep. This swift-winged bird never lights upon the ground, a tree or a building. Its only resting place is on sooty bricks in the dark interior of a chimney or on the inner wood of some hollow tree in a wilderness that knows no chimney. All of the swift's food is captured on the wing. It eats thousands of mosquitoes, gnats and other noxious winged insects. It hunts from daylight to dark, and all its hunting is in the interest of man. The swift gathers its nesting material while on the wing. It has a curious habit, while in flight, of nipping off the tips of dead twigs, and so quickly and neatly is the thing done that the eye barely can follow the operation.

The bluebird, with its "violet of song," is loved wherever it is known. Luckily bluebirds are prolific creatures, for about twenty years ago a severely cold winter made such inroads on the tribe that it was feared the birds might never come back into their own. They came back, and now there are as many as ever and they are continuing a warfare against man's enemies with no pacificist in the land to interpose objection.

The bluebird is given third place in the list of the ten most beneficent birds. Science is cruel in order to be kind. Nearly nine hundred bluebirds met death so that the scientists might prove that they were useful to man. An examination of the stomachs of the martyrs showed that 68 per cent of the food "consists of insects and their allies, while the other 32 per cent is made up of various vegetable substances found mostly in the stomachs of birds taken in winter."

It is a happy thing for the bluebird that the scientists are able to set it down that "so far as its vegetable food is concerned the bird is positively harmless." The bluebird is a beauty. It is neighborly and kindly disposed. Its appealing spring-time note sounds far away, for the bluebird is a ventriloquist. It perches in a tree at the doorstep, but seemingly calls to you from the skies.

The downy woodpecker is the tiniest member of the woodpecker family which spreads itself pretty well over the United States. The downy eats everything in the bug and insect line from tiny ants to big caterpillars. Frequently these little woodpeckers are shot by orchardists because they appear to be injuring the trees. This is what Dr. Glover, an entomologist of the Department of Agriculture, has said concerning this matter of suspicion:

"On one occasion a downy woodpecker was observed making a number of small, rough-edged perforations in the bark of a young shade tree. Upon examining the tree when the bird had flown away, it was found that wherever the bark had been injured the young larvae of the wood-eating beetles had been snugly coiled underneath and had been destroyed by the birds. The hairy woodpecker, a bigger brother of the downy, also is a beneficent bird, but the little one rather outdoes the big one in the work of well-doing.

The phoebe is the true harbinger of spring, even if the robin and the bluebird more frequently are given the honor. The phoebe belongs to the tribe of flycatchers and it takes virtually all of its food on the wing. It cannot come north until spring comes as its companion, because its food does not fly about in cold weather.

I have seen four young phoebes sitting side by side on the limb of a tree while the mother bird for two hours struck down quarry with which to feed them. Not a mistake did she make, and she played no favorites. Out from the limb she would dart, there would be a click of the bill and an insect tidbit would be fed to one of the fledglings. The young were fed one after another, the mother bird apparently remembering which one had been given the last mouthful.

F. E. L. Beal of the Biological Survey says all that is necessary to prove the phoebe's case:

"There are but few birds in the United States more endeared to the rural and village population than the common phoebe. Its habit of associating itself with man and his works, its trustful disposition and the fact that it never is seen to prey upon any product of husbandry have rendered it almost sacred."

The chickadee appealed to Ralph Waldo Emerson. The bird has a philosophy of its own and Emerson recognized it. It stays in the north country all winter, for no cold can shackle its activities nor chill its cheer. Emerson met the chickadee on a blustery winter day and wrote:

> Here was this atom in full breath
> Hurling defiance at vast death;
> This scrap of valor just for play
> Fronts the north wind in waistcoat gray.

A favorite food of the chickadee consists of the eggs of the two species of tent caterpillar moths which are among the most destructive of insects. In winter it eats larvae, chrysalids and eggs of moths, varied by a few seeds. The bird's bill of fare is made up for the main part of insects, nearly all of which are known to the farmer or fruit raiser as pests.

The barn swallow and the purple grackle, cousin swallows, are familiar to all dwellers in the country. There are five other common species of swallows found within the United States and all of them are of beneficent life. Swallows take all of their food, or nearly all of it, while on the wing. Virtually all of the insects which they destroy are either injurious or annoying, and the government scientists say that the numbers of the pests "destroyed by swallows are not only beyond calculation, but almost beyond imagination."

Wordsworth might have asked the American cuckoo, as he did its European cousin, whether he should call it a bird or but a wandering voice. There are two fairly abundant species of cuckoos in America, the yellow-billed and the black-billed. Their habits are much alike. These two birds are ventriloquists. One hears their voices where they are not. The cuckoos thread their way through the tangles of branches, gliding after the manner of ghosts. The bird eats what most other birds disdain. It has a special fondness for the great hairy destructive caterpillars, and when it finds a nest of the tent caterpillars it will not move on until the destruction of the pests and their home is complete. The cuckoo frequently is called the rain crow. It has no place as a weather prophet, however, for it is apt to be especially vociferous in the dryest times.

In the list of the ten best birds there is only one bird of the dooryard. These little birds nest in the currant bushes, in the vines which clamber over the porch or in the hedges which bound the dooryard domain. Sparrows are known as seed eaters, and this might carry an implication that they are destroyers of grain. Some of them are, but we have the scientists as witnesses that the food habits of the chipping sparrow, the bird which comes to your doorstep for crumbs, are all good. It has been written of it that it is "well worthy of the welcome and protection which it everywhere receives."

It must not be thought because ten birds have been named as the best friends of the farmer that there are not scores of others whose daily work is for the good of man. The ten excel, but the others strive with them throughout their short lives to work as well as in them lies for the good of man who too often, misunderstanding their intentions, becomes their persecutor.

SAFE FROM BARBED WIRE.

One of the most trying tasks incident to trench fighting has been considerably lightened by the appearance in the British trenches of gloves made of a fabric which is said to be impervious to barbed wire points, says Popular Science Monthly. The fabric is made up into mittens, with the first finger and thumb separate. The fabric is waterproof, and in addition the gloves are insulated for gripping electrically charged wires.

The same material is applied to the manufacture of sleeping bags, which, when opened, may be thrown over a barbed wire entanglement to allow a soldier to climb over the sharp points without injury. When made up into vests or tunics the fabric is strong enough to turn shrapnel splinters or even a bullet when it has lost part of its momentum. The interlining is antisepticized, so that if a bullet goes through it takes into the wound enough antiseptic wool to prevent poisoning.

The materials used in the manufacture of this remarkable fabric have been sedulously kept secret this far.

GATHERED FACTS

France is stimulating attention to gardening.

Persons with blue eyes are supposed to be immune to color blindness.

Visiting cards made of sheet iron were one of Baron Krupp's specialties.

It is said that a single drop of nicotine will kill a rabbit in three and a half minutes.

A watch requires 175 separate parts, more than 2,400 operations being necessary in its manufacture.

Electrical apparatus taking current from a light socket has been invented by a French scientist to purify the air in a room by literally pumping it into a reservoir and washing it.

To enable his automobile to run over deserts and sandy roads a Californian has equipped it with canvas belts which revolve around the rear wheels, providing smooth tracks.

A new rack for toothbrushes has places in front in which can be inserted cards showing the names of the owners of the brushes.

A new French motorcycle has been given a fourteen horse-power engine by its inventor.

An English sportaman's yacht is so built that his automobile can be lowered into it to provide power.

Queen Elenore of Bulgaria is said to have expended her entire personal fortune for the relief of her subjects.

An automobile has been invented in which the power is transmitted from the engine shaft to the driving shaft by a magnet without any mechanical connection between them.

POSTSCRIPTS

The phonograph and telephone are employed in a South Carolina inventor's automatic fire alarm that calls up a central operator and tells her where a blaze is starting.

Mechanism consisting of a series of jointed strips or lowering several ventilators at once by manipulating a single lever.

An electric light reflector has been invented that can be used for either direct or indirect lighting.

AFRO-AMERICAN CULLINGS

In an address delivered before the graduating class of the night colored high school at Houston, Tex., Prof. I. M. Terrell said in part:

"The fact that the city of Houston makes appropriations for the maintenance of a colored night school certainly has a significance which portends good for the future relationship of the race in this city. It further goes to show that the tendency of the governing element is toward a greater and greater care and interest in all of its citizens. Houston has learned the lesson that its permanence and growth, like that of any city, rest in the highest intelligence and development of all its people. And it is gratifying to note that its public officials as well as its press are showing such broad spirit in their attitude with respect to its colored constituency.

"It makes my heart glad to witness this response which my people are giving to the opportunities afforded them in the night school. As the Post editorial so magnanimously said recently, the white people of Houston can no more get along and do not want to get along without the Negro than the Negro without the white people.

"While this is true, I want to warn you that we are less able to get along without them than they without us. And it is to our interest to make ourselves more and more indispensable by increasing our usefulness. Nothing is necessary but what is of use and value to the development and progress of world civilization. And the consciousness of this fact should serve to inspire us to greater usefulness both to curselves and to the public generally. This graduating class should be an inspiration to the whole Negro population not only in Houston but Texas. These men and women realized the possible increase of their value to themselves and to the city by a systematic training of their minds and hands and they have had the ambition and will to apply themselves in order to secure it.

"As a constituent of society, in an economic way, each individual owes it to that society to become just as great an asset as is within his capacity to be. And the man or woman who is unselfish enough to study his relations and duties to the society in which he lives, and seeks to adjust himself therewith in such a way as will promote the highest good of all, is the most useful and is bound to secure the good will and praise of that society. This statement has a subtle meaning and it is for you to work out that meaning. I might enlarge upon it somewhat by saying that the individual who would be satisfied with a thing, whatever it was, upon the sole condition that it suited him, without regard to how it affected the rest of humanity, is an unfit and undesirable citizen. This applies alike to all men of all stations, everywhere.

"I am glad that we have some among us, as represented by the 23 persons who have come up through the courses of the night school to the point where they are permitted to sit before us to graduate, who have been broad enough in their vision to see that their duty is not to themselves alone; and that, although they have met with obstacles and had difficulties to surmount, they have been willing to make the sacrifice in order to make of themselves more useful citizens. And I wish to suggest that every employer prefers intelligent help. Intelligence grounded upon an honest integrity is a useful and valuable commodity wherever found, and will be recognized and rewarded. It pays to be intelligent; it pays to be honest. Intelligence of the right sort begets honesty because it helps one to see the folly of dishonesty and its inevitable consequences; and at the same time points out the advantages of a sound integrity.

"Skilled labor is a thing being sought after in all work. People are realizing that efficiency means economy. And the laborer who increases his efficiency by increasing his skill through systematic study and training of his mind and hands is bound to secure employment over his less qualified brother."

One thing that was sharply brought home to Mrs. Mary McLeod Bethune, famous Negro teacher, and principal of the Daytona school, was the lack of proper attention for the sick.

"There were hospitals for whites, but none for Negroes," said Mrs. Bethune to an interviewer; "there were nurses for the white people but the Negroes could not afford them. The white physicians were kind, but felt that they could not intrude upon the feelings of white patients by taking care of our sick. The thing to do was to establish our own hospitals, train our own nurses and educate our own doctors. I knew that this meant money and the nickels and dimes that I could get from my own people would not be enough. The only thing for me to do was to beg of those whom God had prospered, that the less fortunate might be given a chance to live and grow better. I went to Thomas H. White and out of a generous heart he gave. Andrew Carnegie responded to a request for $1,000. Altogether we raised $5,000, and with this we built the only hospital for colored people in the district. White physicians co-operate with the Negro. Our nurses do district work and carry the laws of health and sanitation into the homes of our people. The hospital has come as a great oasis in a desert, toward which the people in their sickness and despair reach for health and tenderness."

The old-time cornerstone laying is about to take its place among the relics and back-number customs, for in so many of the buildings of the more modern type the cornerstone has lost its significance. Its place is being taken by the driving of the silver rivet, as was done recently in the 26-story building being erected at Forty-second street and Madison avenue, in New York city. The rivet was driven with the ceremony that usually goes with the placing of the cornerstone, and on the completion of the structure it will be exposed in a silver box in the wall of the lobby.

Nettles good human food? Of course. They have been known as such immemorially in thrifty Switzerland and other careful countries. There is no better rival to spinach in the whole vegetable kingdom. And the nettle ought to be utilized, it does so abound. It is the one weed, almost the only one, that grows in all countries under the sun, so say gardeners who fight it year by year and have never taken the right revenge of eating it.

Bishop Isaiah Benjamin Scott, the only Negro missionary bishop of the Methodist Episcopal church, notified the subcommittee on Effectiveness of Bishops of his intention to retire at the present session of the general conference. The news caused a stir when it became known. Bishop Scott, it was learned, had been in conference with the subcommittee for several days.

Negro delegates to the conference upon hearing of Bishop Scott's intention held a caucus and decided to propose two candidates, also Negroes, as Bishop Scott's successor. They were Rev. Dr. J. W. E. Bowen of Atlanta, a professor at the Gammon Theological seminary, and Rev. Dr. R. E. Jones, editor of the Southwestern Christian Advocate. The Negro delegates desired Bishop Scott's successor to be a bishop with full powers.

The reason given by Bishop Scott for his request for retirement was that the health of one of his daughters will not permit her to live in Africa, where he has been stationed, and that the enforced separation from his wife and family, who live in Nashville, Tenn., makes it undesirable for him to retain his present office. Bishop Scott is sixty-two years old, and in normal circumstances would not be retired until the general conference nearest his seventy-third birthday. He was elected bishop for Africa in May, 1904, and his episcopal residence has been in Monrovia, Liberia. It is understood that he will be retired on a pension of $1,500 a year.

American readers of British newspapers find some queer things in the advertising columns. "Wanted, strong, tidy general, well recommended," for instance, does not indicate a paucity of leaders in the British army. "General" as thus used is merely an abbreviated expression for "general servant" or "houseworker."

Forty-eight materials are used in the construction of a piano, which come from no fewer than 16 countries.

Screens which effectually keep fog from entering buildings by way of electric ventilating fans have been perfected in England.

Extinction of the Petrovitch dynasty in Montenegro, no matter what the ultimate fate of that state may be, is predicted by political writers, who assert the Montenegrins are indignant over the surrender of King Nicholas to Austria. Annexation to Serbia, foreseen by many if the allies win, would be a reunion of two peoples very closely related in race.

An electrically driven machine has been invented for splitting kindling wood.

A boat supported by inflatable pontoons and driven by bicycle gearing has been invented that can be folded into a small parcel for carrying, as it weighs but 28 pounds.

If you count the number of times the letter "a" is used in a book, you will find the average to be less than one in a thousand.

Seventy per cent of the American people use electricity in some form every day.

Told the Truth.

A country gentleman in Ireland, having a small sporting estate to sell, advertised it, and soon afterward a gentleman called to see him about it. "Well, sir," said he, "I have been over that estate you advertised, and find it all right except that fine trout stream you mentioned." "It runs through the wood in the lower part of the meadow," said the land owner. "What! That little brook? Why, it doesn't hold much more than a spoonful. I am sure if you were to empty a pail of water into it, it would overflow. You don't call that a fine stream, do you?" "Faith," said the owner, blandly, "if it were much finer you couldn't see it at all!"

Really More Likely.

"Professor, I picked up this hairpin at Pompeii. Do you think the Pompeiian women wore hairpins such as this?" "I think it more likely that it was dropped by another tourist," responded the professor after some thought.

INTERNATIONAL SUNDAY SCHOOL LESSON

(By E. O. SELLERS, Acting Director of Sunday School Course of the Moody Bible Institute, Chicago.)

LESSON FOR JUNE 4.

THE CALL OF THE WEST.

LESSON TEXT—Acts 15:36; 16:15.
GOLDEN TEXT—Come over into Macedonia and help us.—Acts 16:9.

Following the commission's report at Antioch of the decision of the Jerusalem church, Paul and Barnabas and others continued their evangelism in that city (ch. 15:35). These leaders soon felt the need of revisiting the scenes of their former labors (v. 36), but when it came to the organization of their party, Paul refused to accede to the decision of Barnabas that John Mark should accompany them (vs. 37, 38, see Acts 14:13). So sharp a contention arose that two parties were organized. That Paul later forgave Mark is evidenced by his tender references to him.

I. A Closed Door. Ch. 16:1:8. Paul's companions for this second missionary tour were Silas (15:40), Luke (see use of word "we," v. 13), and Timothy (v. 1-3). The latter came of good ancestry, had good training and was of good report, still to avoid contention he submitted to the rite of circumcision. Paul's work was to promulgate the Jerusalem decree, to establish or to confirm the churches and to add to these churches new converts. But that did not entirely fulfill Paul's commission (9:15). The word "Asia" (v. 6) means the Roman province of Asia and, wisely obeying the Spirit's direction, Paul passed on until he came to the seaport town of Troas. At a later time Paul spoke the "word of the Lord Jesus" in Asia with wonderful effect (19: 1, 8, 19, 26, 27). It must have burned within the bones of Paul thus to be restrained, but it did not serve as an excuse for him to take a vacation, but rather to seek new fields wherein to preach. Thus he came to Troas. It must have appeared strange at the time, but God was working out larger plans for his faithful servant and for the advancement of his infant church. In this connection it is suggestive (see Revised Version), that the name given to the Spirit is "the Spirit of Jesus," indicating his nearness to and directions in every advance step.

II. The Macedonian Call. v. 9-13. Paul had several epochmaking visions; on the Damascus road (9:3, 4 and 26:19); in Jerusalem (23:11); at the time of his shipwreck (27:23), and the one we are now considering. A vision is a knowledge of the need and of the resources at one's command. Grecian beauty, philosophy, art and culture needed Christ. Christ as a resource was adequate and available to supply that need. This vision Paul saw: through it God called him to Macedonia. "We" (the first use of that pronoun in the book of Acts), Paul and Luke, immediately essayed to obey. Tradition tells us that Luke "the beloved physician" was a native of Antioch and had met Paul at the university of Tarsus.

The promptness with which these men responded is worthy of emphasis. The vision amounted to a call, and a response to God's call must for all time be the secret of a happy and effective life. There is no progress in mere metaphysical speculation.

III. The Open Door, v. 14, 15. On what seeming trifles does history turn! An outcast wandering Jew coming to help a proud, cultured, influential foreign city, but he bears the Gospel which alone can be of help to them. Paul did not wait to "investigate the field" nor to establish a working organization. He knew a better point of contact, and that was to find those in that city who knew God even though ignorant of Christ. He began by preaching Jesus, not comparative religions, nor did he seek to found "community centers" with soup kitchens and social uplift. Paul knew that to elevate the individual by establishing him in the faith of Christ would soon result in community uplift. On the other hand, a faith which evaporates in words and does not give tangible, concrete evidence in works may well be challenged as to its being genuine. There was no supernatural direction as to what part of Macedonia Paul was to visit, and exercising his common sense, Paul went at once to the principal city. He did not begin at once to preach the Gospel (v. 12 R. V.), but waited and watched for an opportunity, doubtless praying much for a favorable opening (Ch. 13: 14; 17:2; 18:4). When they did begin it was in a most modest and humble way. "Not even in a synogague—no crowd called together by flaming advertisements; simply a company of obscure, praying women gathered according to Jewish custom, apart from the synagogue, by the side of running water."

The "man of Macedonia" seems to have been a woman unless we consider the Philippian jailor. This open-air meeting was one of the most notable in history. The Lord opened the heart of pious Lydia and it was the turning point of the evangelization of Europe and America and the world. God must open the hearts of men and women (John 6:44, 45; Eph. 1:17, 18; Luke 24:45), and this he is willing and glad to do. The steps of this woman's conversion are clearly marked and present a good type. (1) She went out to pray (v. 13). (2) She heard the word (v. 13, 14; see also John 5:24). (3) She had her heart opened by the Lord (v. 14). (4) She "gave heed to the things which were spoken" (v. 13 and Mark 16:16). (5) She made public confession of her newly-found faith by baptism.

(6) She carried with her the whole household, perhaps children, workers in her business and servants (v. 31-33; 1 Cor. 1:16).